PART V—PLANT.

COST OF PLANT REQUIRED FOR A MILL.

It is not possible, for want of space, to give more than one or two estimates of cost of plant, and those given are only intended to show approximately what it would cost to erect a large pulp-mill. Those interested in the subject will no doubt obtain their estimates after having decided on the proposed capacity of the mill.

Sindall's estimate for a mill.—Mr. R. W. Sindall in his booklet on "Bamboos for paper-making" of 1909 (Marchant, Singer & Co., 47, St. Mary Axe, E. C., London) gives the cost of a mill with a weekly output of 200 tons of bleached bamboo-pulp, working with caustic soda, as follows:—

	£
Estimated approximate cost of plant	20,000
Buildings and foundations	12,000
Contingencies	4,000
Total	36,000

James Bertram & Sons' estimate for a mill.—Various estimates by firms in England and America are available. The following is one kindly sent by James Bertram & Sons, Limited, of Leith Walk, Edinburgh.

A mill is designed to produce about 20 tons of air-dried unbleached bamboo-pulp per day of 24 hours, working by the soda process.

Approximate cost of the machinery, all delivered f. o. b. Glasgow, £15,500 including steam and power plant. Approximate weight 600 tons; to the above estimate will have to be added cost of buildings, etc., which will vary according to the locality in which they are erected.

Estimate put up by Lounsbery Bros. of Chicago.—Another estimate is available from America, which was sent by Lounsbery Bros. & Co., of 305, Dearborn St., Chicago. The estimate, which was made in dollars,

has been converted into pounds sterling. The figures for a Soda-Pulp-Mill estimated to turn out 10 tons of bleached pulp per 24 hours are :—

	£
Buildings	5,800
Add—10 per cent.	580
	6,380

Equipment.

	£
Power House plant	3,900
Boiler ,, ,,	1,400
Wood Preparing room	220
Digester Building room	1,700
Pulp Washing	1,420
Screen and Wet Machine room	1,140
Incinerator room	1,020
Leaching ,,	720
Evaporating ,,	1,600
Causticizing ,,	840
Miscellaneous	2,400
	16,360
Add—10 per cent.	1,636
	17,996

Summary.

	£
Buildings	6,380
Equipment	17,996
	24,376

A further estimate is given by this Company for a mill working by the sulphite process, with an outturn of 10 tons of unbleached pulp in 24 hours. It reads as follows :—

	£
Buildings	5,380
Add—10 per cent.	538
	5,918

Equipment.

	£
Power House plant	3,800
Boiler	1,400

	£
Wood Preparing plant	240
Digester Building plant	1,600
Blow Tank room	440
Sulphur Burner	140
Acid making plant	1,820
Screen and Wet machine	1,120
Sulphur storage and lime mixing room	150
Miscellaneous	2,200
	12,910
Add—10 per cent.	1,291
	14,201

Summary.

	£
Buildings	5,918
Equipment	14,201
	20,119

The cost of the buildings is based on American figures and would therefore have to be adapted to Indian conditions.

Estimate by the Stebbins Engineering and Manufacturing Co.—Another estimate is made by the Stebbins Engineering and Manufacturing Co., 74-78, Smith Buildings, Watertown, New York, for a Soda Plant, which is capable of turning out $8\frac{1}{2}$ tons of dry pulp per day; cost, including materials and buildings as applied to America, £18,000.